

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MOUNTAIN LAKE, LOWER	Lake Area (ha):	24.28
Town: HAVERHILL	Maximum depth (m):	7.7
County: Grafton	Mean depth (m):	3.8
River Basin: Connecticut	Volume (m ³):	917000
Latitude: 44°07'30" N	Relative depth:	1.4
Longitude: 71°57'35" W	Shore configuration:	1.14
Elevation (ft): 774	Areal water load (m/yr):	15.65
Shore length (m): 2000	Flushing rate (yr ⁻¹):	4.10
Watershed area (ha): 938.2	P retention coeff.:	0.50
% watershed ponded: 1.3	Lake type:	artificial

BIOLOGICAL:

18 February 1992

14 August 1991

DOM. PHYTOPLANKTON (% TOTAL)	#1	FILAM. BL-GR SPP 60%	MELOSIRA 35%
	#2	RHIZOLENIA 15%	ASTERIONELLA 25%
	#3	COCCOID BL-GR SPP 10%	DINOBRYON 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)			175
CHLOROPHYLL-A (µg/L)			3.27
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 39%	KELICOTTIA 53%
	#2	KELICOTTIA 30%	CONOCHILUS 12%
	#3	NAUPLIUS LARVAE 20%	KERATELLA 11%
ROTIFERS/LITER		78	159
MICROCRUSTACEA/LITER		23	16
ZOOPLANKTON ABUNDANCE (#/L)		101	180
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			5.3
BOTTOM DISSOLVED OXYGEN (mg/L)		8.3	0.3
BACTERIA (fecal col., #/100 ml) #1			< 1
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 6.5
Hypolimnion volume (m³): None
Anoxic volume (m³): 3000

CHEMICAL:Lake: MOUNTAIN LAKE, LOWER
Town: HAVERHILL

	18 February 1992		14 August 1991		
DEPTH (m)	2.0	5.0	2.5		6.5
pH (units)	6.3	6.5	7.2		6.7
A.N.C. (Alkalinity)	13.8	13.8	12.8		18.3
NITRATE NITROGEN	0.06	0.03	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.005	0.005	0.004		0.020
CONDUCTIVITY (μ mhos/cm)	85.2	84.2	73.5		80.0
APPARENT COLOR (cpu)	11	13	28		63
MAGNESIUM			1.00		
CALCIUM			6.4		
SODIUM			5.1		
POTASSIUM			0.72		
CHLORIDE	10	9	7		7
SULFATE	9	9	7		5
TN : TP					
CALCITE SATURATION INDEX			2.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1991

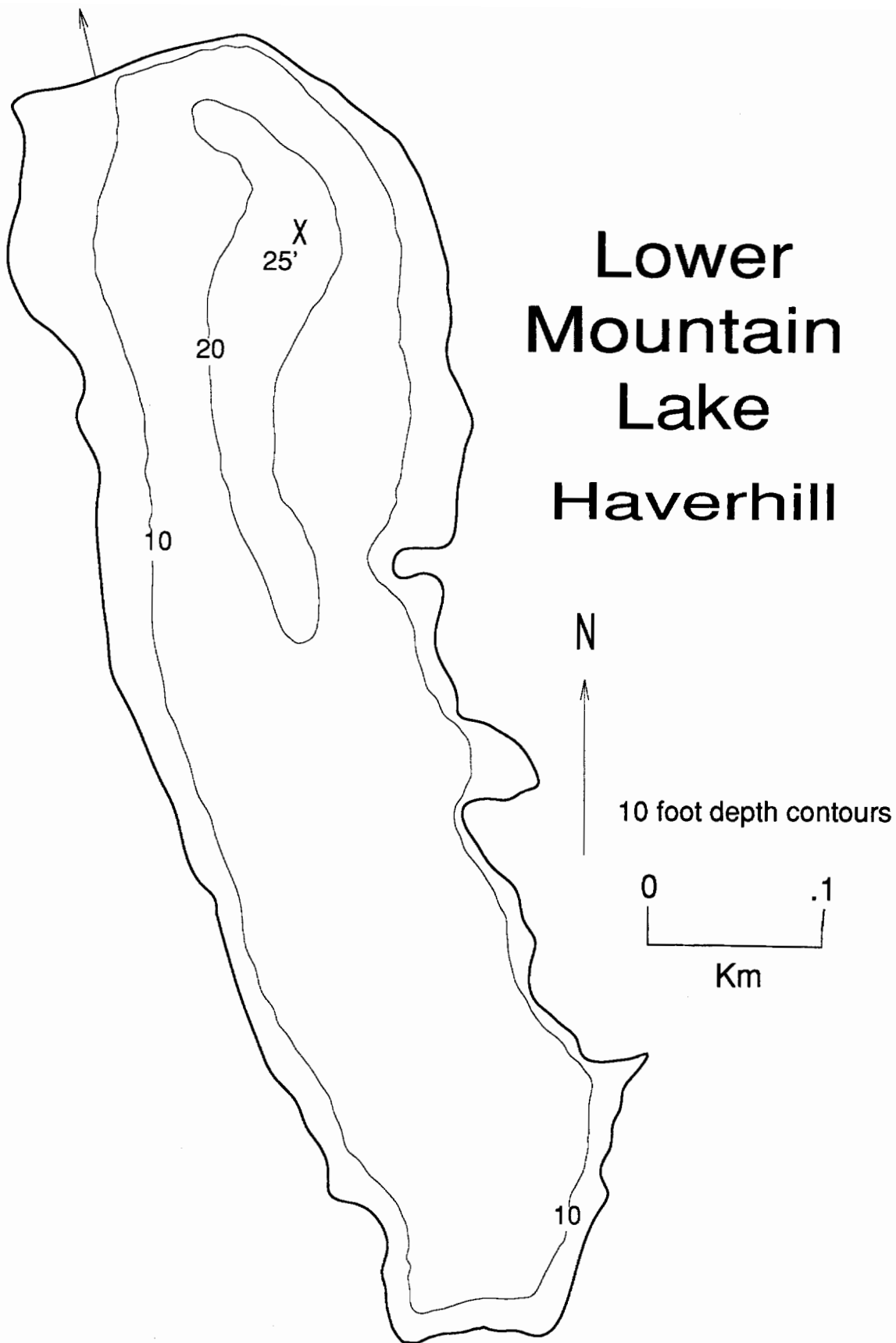
D.O. S.D. PLANT CHL TOTAL CLASS

**	1	1	0	2	Oligo.
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COMMENTS:

1. This is a relatively new man-made lake. It was not listed in the 1964 report of lakes (NHSP, 1964). A private recreational community was developed in the late 1960's, known as Mountain Lakes District. It was built around two man-made lakes separated by a causeway, which we now refer to as Upper (southern) and Lower (northern) Mountain Lakes. The dammed stream (Waterman Brook) flows in a northerly direction; thus the 'Lower' lake is lower on the brook but north of the 'Upper' lake.
2. Cryptomonads (65%) was the dominant class of wholewater plankton, with Chroomonas (40%) and Cryptomonas (25%) being the dominant genera.
3. Olsen Dam creates this artificial impoundment.

Lower Mountain Lake Haverhill



[illegible]

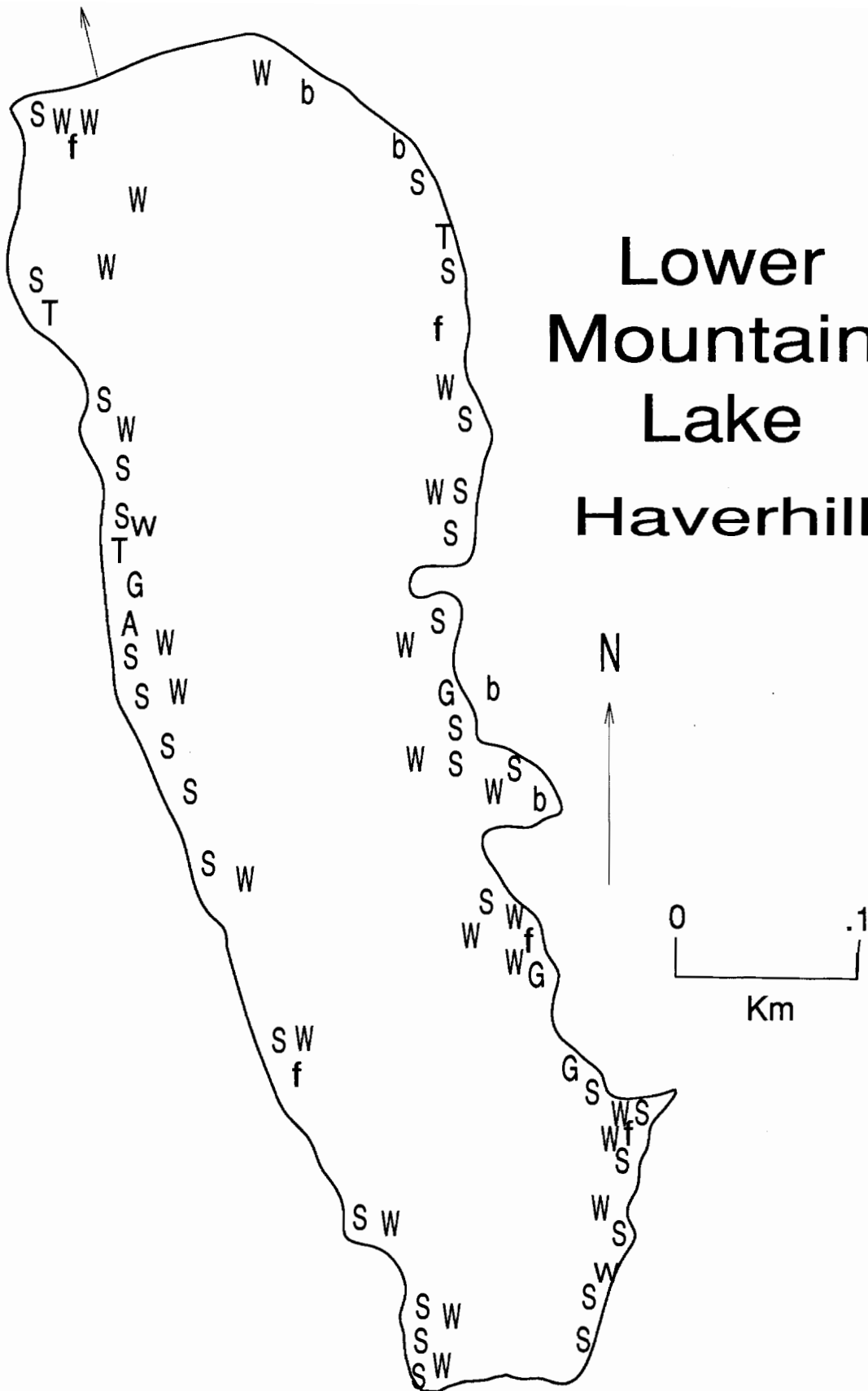
TOWN: HAVERHILL
WEATHER: HAZY & HOT; LIGHT BREEZE

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SECCHI DISK (m):      5.3           COMMENTS:
BOTTOM DEPTH (m):     7.7
TIME: 1315
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*Dissolved oxygen values are in mg/L

Lower Mountain Lake Haverhill



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